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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,400

07/01/2005

Kazutaka Baba

8007-1094

6327

466 7590 03/06/2008

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EXAMINER

SASTRI, SATYA B

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,400	Applicant(s) BABA, KAZUTAKA	
	Examiner SATYA B. SASTRI	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/3/07, 7/1/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>Machine translations, JP2002-179760, JP2001-329208</u> |

DETAILED ACTION

1. This office action is in response to application filed on September 1, 2005. Preliminary amendment filed on September 1, 2005 is made of record. Claims 1-9 are now pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoyama et al. (JP 2001-329208, Machine translation) in view of Umeda et al. (US 4,431,790).

Pending an official translation, a machine translation is used in the body of this rejection.

Nonoyama et al. disclose acrylic sols comprising fine acrylic polymer particles, a plasticizer, a filler, a blocked urethane resin, a curing agent and a foaming agent (abstract, claim 1).

The wt. ratio of acrylic sol to blocked urethane ranges from 90/10 to 15/85 (claim 2).

Further, the prior art discloses that the acrylic polymer is of a core shell type (0019).

The blocked urethane resin is obtained from reacting a polyether polyol or a polyester polyol and diisocyanates (0027).

The prior art is silent with regard to compositions comprising modified polyamines as recited in claim 1.

The secondary reference to Umeda et al. discloses polyurethane resin compositions comprising polyoxyalkylene polyamine curing agents modified with an acrylic acid derivative or a compound with an oxirane ring (abstract, col. 1, lines 55-68, col. 2, lines 1-56). It would have been obvious to one of ordinary skill in the art to utilize modified curing agents of Umeda et al. in the compositions of Nonoyama et al. because Umeda et al. teach that such polyamines have improved reactivity towards isocyanates and suitable gel times and can be used without any accelerators.

4. Claims 1-4, 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoyama et al. (JP 2001-329208, Machine translation) in view Smith (US 6,723,821 B2).

The discussion with regard to Nonoyama et al. in paragraph 3 above is incorporated herein by reference.

The difference between the prior art and the instant invention is that the prior does not disclose modified polyamine adducts.

Prior art to Smith concerns polyamine epoxide adducts for use in polyurea polymers. The prior art discloses that use of such diamine adducts is advantageous from the standpoint of improved adhesion and chemical resistance while preserving optimal set rates and flowability. Jeffamine™ is disclosed as a suitable amine for adduct formation (abstract, col. 1, lines 10-13, col. 2, lines 55-69). It would have been within the level of ordinary skill in the art to utilize such polyamine epoxide adducts to cure blocked polyurethanes so as to obtain similar benefits in

properties because both polymers utilize the reaction of isocyanates with amino compounds and the advantages of the amino compound-isocyanate chemistry of Smith would necessarily be transferred to urethane resins of Nonoyama et al.

5. Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Nonoyama et al. (JP 2001-329208, Machine translation) in view of Umeda et al. (US 4,431,790) and Tatsuro et al. (JP 2002-179760, Machine translation) or Nonoyama et al. (JP 2001-329208, Machine translation) in view of Smith (US 6,723,821 B2) and Tatsuro et al. (JP 2002-179760, Machine translation).

The discussions with regard to Nonoyama et al., Umeda et al. and Smith in paragraphs 3 and 4 above are incorporated herein by reference.

The difference between the prior art and the instant invention is that the prior does to Nonoyama et al. not disclose polyurethanes derived from trifunctional polyols.

Pending an official translation for Tatsuro et al., a machine translation is used in the body of this rejection. Nonoyama et al. disclose that the urethane resin may be derived from polyether polyols. Tatsuro et al. suggest various polyether polyols that may be useful for preparing urethane resins, with glycerol and propylene oxide adducts as a preferred polyol (abstract, 0019-0021). Given the art recognized suitability of the glycerol based polyols for preparing polyurethanes, it would have been within the capabilities of a skilled artisan to utilize such polyols to prepare polyurethane resins and thereby arrive at the presently cited claims. One skilled in the art would be motivated to use triols as opposed to diols in order to achieve a higher degree of crosslinking via isocyanato groups.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112. The examiner can be reached on M-W, 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Satya B Sastri/

Examiner, Art Unit 1796